### THE CANADIAN CITY

edited by Kent Gerecke

Chapter 14

# Mismatch between size of households and of dwelling units

by Hans Blumenfeld



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U.S. Orders
BLACK ROSE BOOKS
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#### Chapter 14

# MISMATCH BETWEEN SIZE OF HOUSEHOLDS AND OF DWELLING UNITS

#### Hans Blumenfeld

#### The Concept of a Housing Shortage

In Canada, as in most countries, there is a broad consensus that a housing shortage exists which calls for correction by public policy. Many measures have been adopted for this purpose: cash grants and subsidies, loans at preferred conditions, loan insurance, tax deferments, reductions, and exemptions, regulations of financial institutions. While many of these pursue also more specific purposes, their general underlying rationale is a perceived necessity to channel into the "Housing Sector" a greater proportion of the Gross National Product than would be allocated to it by the market. From the point of view of the public interest shortage of a good or service means that its supply is inadequate to sustain the healthy development of the population. While there are important qualitative aspects of housing, the most basic determinant of adequacy is the number of dwelling units and of rooms per household and per person. Is the present (1981) number adequate?

#### A Hierarchy of Housing Demand

It is generally agreed that shelter is a basic human need second only to food: shelter against cold and heat, water and dust, beasts of prey and vermin. At present the majority of the human race is not provided with adequate shelter. However, in Canada it is normally available to everyone; here "shortage" can only refer to higher levels of demand.

The next level is privacy: a separate dwelling unit for every person or group of persons who want to have their own household, and a separate room, if desired, within a household. Evidently there are also qualitative aspects of privacy — protection from sight, sound, and smell — as well as

aspects of comfort and convenience. These are hard to measure and will not be dealt with in this study which will investigate only quantitative adequacy.

"Adequacy" is of course culturally conditioned. It is here defined as enabling full physical, mental, and moral development of all housing occupants.

It should not be overlooked that there exists a third level of housing demand: social prestige, popularly formulated as "keeping up with the Joneses" (and getting ahead of them). By definition, this is a zero-sum game. While nobody can be prevented from engaging in it, it does not serve any public interest. Preferential treatment of the housing sector can be justified only in order to provide adequacy of shelter and of privacy.

#### Households Are Getting Smaller

Households, defined as occupied dwelling units (other than institutions) have consistently grown at a faster rate than population. While Canada's population increased by 13.2% from 1971 to 1981, households increased by 37.3%. As a result average size of households fell from 3.9 in 1961 and 3.5 in 1971 to 2.8 in 1981 — less than half of what it was a century ago.

This is partly due to a decrease in the number of children per family. From 1961 to 1981 the number of children ever born per 1000 married women<sup>1</sup> has decreased from 2,987 in 1971 to 2,493 in 1981, by 16.5%. However, even more significant has been the trend for all adult persons, single or married, to establish their own household as their income increased. A century ago the typical household contained, in addition to a nuclear family, old parents and aunts, adult children, often even married ones, servants, and large numbers of roomers, including second families. Few representatives of any of these groups are left.

Table 1 shows the continuing shift from larger to smaller households. The two-person household is now the modal group, followed by the one-person household; these two groups accounted for almost half (49.4%), and together with three-person households for two thirds (66.9%) of the total, while only one out of seven (14.5%) contain five or more persons; only one out of fifty (2.0%) of all dwelling units are inhabited by seven or more persons.

The picture is of course somewhat modified if percentage distribution of persons is considered rather than the distribution of households. The four-person household emerges as the modal group, accommodating 25.9% of all household dwellers. However, close to half (45.5%) live in small (1 - 3) and not much more than a quarter (28.3%) in larger (5 or more persons) households. Households with seven or more persons account for only 5.4% of all persons living in households.

#### Increasing Size of Dwelling Units

While households have consistently decreased in size, the size of dwelling units provided to accommodate them is on the increase. From 1971 to 1981 the average number of rooms per dwelling unit has increased from 5.4 to 5.7, and the median from 4.7 to 5.0. An average of more than two (2.05) rooms is now available for every man, woman, and child in Canada; if kitchens are not counted as rooms, the average is still at least 1.63. A room is defined by the Census of Canada as "an enclosed area within a dwelling unit which is finished and suitable for year-round living". It tends to exclude rooms in basements which have been finished by the occupants. The dwelling units listed in Table 2 also do not include vacancies or second homes. Inclusion of these three groups

TABLE 1 Households (1000) by number of persons, Canada, 1971 and 1981.

Persons/			Percent	of Total	Percent Increase	Number of Persons 1981		
Household	1971	1981	1971	1981	1971-1981	1000	%of Total	
1	811	1,681	13.3	20.4	107.5	1,681	7.1	
2	1,527	2,398	25.3	29.0	57.5	4,796	20.1	
3	1,044	1,450	17.3	17.5	38.6	4,350	18.3	
4	1,066	1,544	17.7	18.7	44.1	6,176	25.9	
5	722	753	12.0	9.0	4.3	3,765	15.8	
6	420	2 <del>9</del> 3	7.0	3.5	-30.1	1,758	7.4	
7	238	93	3.9	1.1	-60.9	651	2.8	
8	97	38	1.6	.4	-61.1	304	1.3	
9	53	16	.9	.2	-70.0	144	.6	
10 + (11)	62	16	1.0	.2	-74.5	176	.7	
Total	6,040	8,282	100.0	100.0	37.3	23,801	100.0	
1-2	2,338	4,079	38.6	49.4	75.0	6,477	27.2	
3-5	2,832	3,747	<b>47</b> .0	47.2	32.2	14,291	60.0	
6+	870	456	14.4	5.4	-48.2	3,033	12.8	

Source: 1981 Census of Canada. Occupied private dwelling units. Types and tenure. Table 5

probably would increase the number of rooms by 10% or more. To what extent Table 2 understates the total number of rooms. Dwelling units are heavily concentrated in the middle range of 4 - 6 rooms which account for almost three out of five (59.7%) of the total; a quarter (25.5%) are larger and only one out of seven (14.8%) are smaller. While small and medium sized units have increased by about a quarter during the past decade, large ones have increased by 69.6%; those with nine or more rooms have doubled. At the other end, 1- and 2-room units have increased at less than half the average rate of increase. At present (1981) these small units provide only 1.2% of all rooms, with an additional 5.0% provided by 3-room units. Not much less than half (45.3%) of all rooms are to be found in units with 7 or more rooms.

#### The Growing Mismatch

Thus, while the distribution of household sizes has shifted to the lower end, dwelling unit size has moved in the opposite direction. To some extent this reflects the increase of the average unit size from 5.4 to 5.7 rooms, by 5.56%. However, this explains only part of the divergence.

Cross-tabulations of household and unit size are not yet available for 1981. It is, however, possible to determine the deviations from a theoretical

TABLE 2

Dwellings (1000) by number of rooms, Canada, 1971 and 1981.

Rooms/	10	000	Percent	of Total	Percent Increase	Number	of Rooms, 1981
Dwelling	1971	1981	1971	1981	1971-1981	1000	% of Total
1	92	106	1.5	1.3	15.2	106	0.2
2	193	230	3.2	2.8	19.2	460	1.0
3	612	783	10.1	9.5	29.2	2,349	5.0
4	1,083	1,303	18.0	15.7	20.2	5,212	11.0
5	1,363	1,723	22.6	20.8	26.4	8,615	18.2
6	1,153	515,1	19.1	18.2	31.3	9,090	19.3
7	723	1,085	12.0	13.1	33.3	7,595	16.1
8	430	<i>7</i> 70	7.1	9.3	78.1	6,160	13.0
9	193	338	3.2	4.7	101.2	3,492	7.4
10 + (11)	193	378	3.2	4.6	95.6	4,158	8.8
Total	6,035	8,271	100.0	100.0	37.1	47,237	100.0
1-2	897	1,119	14.8	13.6	24.7	2,915	6.2
4-6	3,599	4,541	59.7	54 <i>.7</i>	26.2	22,917	48.5
7+	1,539	2,611	25.5	31.7	69.6	21,405	45.3

SOURCE: 1981 Census of Canada, 20 percent Data Base, March 1, 1983, Page 7.

norm. Two such norms have been established, n+2 and n+3, n being the number of persons in a household. A household, it may be recalled, is defined by the Census as an occupied dwelling unit. In 1981 the actual size was n+2.87; if the rooms previously mentioned as excluded by the Census are included, it probably exceeds n+3. (Table 3). This is an extraordinary high standard. If quality is adequate — evidently a big If — most Canadians are likely to consider a standard of n+2 as adequate. This standard would enable a single person to occupy a living room, bedroom, and full-sized kitchen; or a family consisting of parents, two male and two female children to have 3 bedrooms, kitchen, living room, dining room, play room, and guest room.

# Re-evaluating the Housing Problem

It appears that there is no overall housing shortage in Canada. This does not mean that all is for the best in the best of all possible worlds; but the problems are specific.

First, an increasing number of households are faced with the choice either to cut back on the satisfaction of other essential needs or to live in substandard housing conditions. This is in fact a problem of inadequate income, or the housing aspect of poverty. It calls for more income rather than for more housing.

Second, there are problems of quality of maintenance and of equipment. These call for investment in the existing stock rather than for new housing.

Third, there are problems of environment, noise, air pollution, lack of sunshine, daylight, and non-depressing views. Here, investment in the existing stock or, more frequently, in the environment will in most cases be more cost-effective than investment in new housing.

Finally, there is the problem which concerns this study: mismatch between size of household and size of dwelling unit, or maldistribution. The 1971 Census of Canada had already shown very high percentages of small (1 - 3 persons) households occupying large units and many large households in small units. Table 4 shows this distribution for small as well as for the largest (10 or more persons) households.

For each of the three small household sizes, the modal group corresponded to the n+2 standard and accounted for slightly more than a quarter of all households. Less than a quarter of the one- and two-per-

TABLE 3 Surplus or Deficit of Rooms under Standards n +2 and n +3, Canada, 1981

		Adequate		Roo	ព្រាន		
Persons in	.Households	D.U.'s	Surplus of	Available	Required	Surplus of Rooms	
Household	1000	(n+2)*	of D.U.'s	in D.U.'s	n+2	n+2*	n+3**
1	1,681	1,119	-562	2,915	5,043	-2,128	-3,809
2	2,398	1,303	-1,095	5,212	9,592	<b>-4,38</b> 0	-3,808
3	1,450	1,724	273	8,615	7,250	1,365	85
-	1,544	1,515	-29	9,090	9,264	-174	-1,718
4 5	753	1,085	332	7,595	5,271	2,324	1 <i>,</i> 571
6	293	770	477	6,160	2,344	3,816	3,523
7	93	388	295	3,492	837	2,655	2,562
8 <sup>+</sup>	70	378	308	4,158	840	3,318	3,248
Total	· 8,282	8,282		47,237	40,441	6,796	-1,486

<sup>\*</sup> Includes 1- and 2-room units.

SOURCE: Tables 1 and 2

TABLE 4
Number of rooms occupied by households of 1,2,3 and 10 or more persons, Canada 1971.

		NUMBER OF PERSONS										
Number of Rooms	1 person		2	2 persons		3 persons		10 or More Persons				
	1000	% of Total	1000	% of Total	1000	% of Total	No.	% of Total				
1	72	8.9	11	.7	3	.3	285	.5				
1 2	117	14.4	50	3.3	13	1.3	525	.8.				
3	218	26.9	263	17,1	77	7.4	1,150					
4	157	19.4	393	25.9	247	23.7	2,920	4.7				
5	. 99	12.2	338	22.1	270	25.9	8,420	13.6				
	69	8.5	238	15.6	207	19.8	12,490	20.0				
6 7	35	4.3	121	8.0	115	11.0	12,955	21.0				
8	19	2.3	62	4.0	61	5.8	10,255	16.6				
9	9	1.1	25	1.6	26	2.5	5,685	9.2				
10+	16	2.0	26	1.7	24	, 2.3	7,250	11.7				
Total	810 `	100.0	1,526	100.0	1,043	100.0	61,935	100.0				
4 or more		49.3		78.9		90.1						
5 or more		30.4		53.0		67.1						
6 or more		18.2		30.9		41.4						
7 or more		9.7		15.3		21.6						
8 or more		5.4		7.3		10.6						
5 or less								21.5				
7 or less								62.5				

<sup>\*\*</sup> Includes 1-, 2-, and 3-room units.

son households and less than a third of those with three persons fell below this standard. By contrast, of the large households with ten or more persons only about one tenth reached the much less demanding standard of one person per room, and over one fifth contained two or more persons per room. The modal group had seven, or n - 3 rooms; only 27.5% had more, while over one fifth (21.5%) contained two or more persons per room.

One- and two-person households exceeded the n-2 formula in about half (49.8% and 53.0%) and n-3 in almost a third (30.4% and 30.9%) of all cases; while more than three out of five (62.5%) of the households of ten or more persons were confined to units with seven or fewer rooms.

Pending publication of the corresponding figures for 1981 the percentage of households of different sizes occupying single-family houses (detached and attached) may indicate trends in occupancy of large units, as not many such houses contain less than five rooms. As Table 5 shows, the share of single-family houses dropped from 71.4% of the total in 1971 to 67.0% in 1981. The drop is accounted for entirely by one-person households. However, in absolute numbers single-family house occupancy increased inversely to the number of person per household.

#### Probable Reasons for Maldistribution

In the absence of detailed data identification these reasons can be no more than an informed guess. Three reasons appear to be plausible: geographic variations, maldistribution of income, and lack of mobility.

Certainly in communities with a stagnant or decreasing population there may be many large houses in existence with few people to occupy them. There are many such communities in Canada, but most of them are small. So this group probably accounts for only a modest percentage of the nation's under-occupied units, and for very few of those built during the last decade.

The 720,000 large (8 or more rooms) dwelling units which were added to the housing stock during the same 1971 - 1981 decade in which large (6 or more persons) households decreased by 414,000 must have been built by or for people with large incomes. Maldistribution of income unquestionably is the major reason for maldistribution of hous-

TABLE 5
Households by number of persons, total and in single-family units.
Canada, 1971 and 1981.

Persons in Household			H	ouseholds in Si	ingle-Family U	nits					
	1000		1000		% of All Units		Percent Change				
	1971	1981	1971	1981	1971	1981	1971-1981				
1	810	1,681	367	622	45.4	36.8	69.8				
2		2,398		1,502		62.6					
3		1,450		1,080		74.8					
2-3	2,569	3,848	1,670	2,582	65.0	66.8	55.0				
4		1,544		1,299		84.0					
5		753		630		84.0					
4-5	1,784	2,297	1,460	1,929	81.8	84.0	32.0				
6	•	293		261		88.7					
7		96		84		90.0					
6-7	657	389	583	345	88.7	88.7	-40.6				
8		38		34		89.5					
9		16		15		91.1					
10+		16		15		98.6					
8+	212	70	196	64	88.9	91.9	-67.5				
Total	6,031	8,281	4,276	5,543	72.0	67.5	30.0				

SOURCE: 1981 Census of Canada, Occupied private dwellings, Table 5

ing. The observed increase in the latter may well indicate that the former has also increased significantly during the last decade. However, widespread though unsystematic observation shows that a considerable number of large units are occupied by households of low income. Typically these dwellings are old; frequently they have some deficiency as to size or rooms, maintenance, equipment, or environment. Also typically, though not exclusively, they are owned and occupied by one or two older people whose children have left home. Their occupants find it increasingly difficult to maintain them. But they hold on to them because they give them the security of being housed for the rest of their lives with practically no claim on their limited income. If they were guaranteed the same security in a permanently rent-free small apartment, and given some assistance in the required change of life style, they might well be persuaded to trade in their houses to an organization engaged in assisted housing. These big old houses are most suitable for the group most in need of financial housing assistance, large families with low income.3

#### **Policy Considerations**

The most significant conclusion emerging from the foregoing analysis is a negative one: there is no warrant for giving preference to the "Housing Sector" as such. This sector has not been starved; more likely it has been overfed. The many measures introduced to promote the housing sector have done very little to solve the specific housing problems outlined above; many of them, in particular various tax favours, may have substantially encouraged the overproduction of big houses. In some cases the additional rooms in such houses may contribute to the happiness of their inhabitants by accommodating guests, music, books, or works of art; but in most cases they probably merely serve as chips in the zero-sum game of gaining social prestige by conspicuous consumption.

One might consider counteracting the maldistribution of housing by a progressive tax on occupancy of rooms in excess of n+2. This would prompt occupants either to subdivide their premises, or to choose smaller quarters, or to share them with more people. There are obvious difficulties with such a tax. Number of rooms, regardless of their size and other qualities, is a poor indicator of excess. While it is not impossible to take qualitative aspects into account, this would be done only by sacrificing one of the most attractive features of the tax, ease of assessment. There is also a question of the appropriate unit of government. Imposition by a municipality would be self-defeating, driving wealthy people into neighbouring taxing units. Imposition on an extensive area would call for local exemption of underpopulated communities.

It may well be that a substantial correction of the maldistribution of housing can be achieved only by a correction of the maldistribution of income. As the familiar measures for ex-post-facto redistribution of income, taxes and welfare payments, have consistently failed to achieve this goal, structural changes in the economy may be called for.

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#### **NOTES**

- 1. 1981 Census of Canada, 20 percent Data Base, March 1, 1982, p. 4.
- 2. 1971 Census of Canada, Housing, Introduction to Volume II (Part 3), p. 28.
- 3. See: Hans Blumenfeld, Metropolis and Beyond, John Wiley & Sons, New York, 1979, pp. 221-2.

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